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W. G. Eckert,[1] *M.D.*

The Pathology of Self-Mutilation and Destructive Acts: A Forensic Study and Review

The forensic practitioner is well aware of the self-destructive behavior of man through his experiences in evaluating cases in which a life has been taken through self-destructive means, but he may never encounter those cases occasionally confronting his clinical colleagues in which this self-destructive behavior is manifested against a part of the body and results in serious injury or mutilation. This abnormal behavior has been referred to by Karl Menninger [*1*] as "focal suicide" and is a manifestation of primary aggressive tendencies directed against one's self. Focal suicide is part of Menninger's general classification of self-destructive behavior of man (Table 1) and includes self-mutilations, malingering, "polysurgery" (compulsion to submit to surgical operations on many occasions), purposeful accidents, and impotence and frigidity.

TABLE 1—*Karl Menninger's classifications of self-destructive behavior.*

Self-Destructive Behavior

1. Focal Suicide
   - A. Self-Mutilations
     - a. In mental institutions, prisons, and jails
     - b. Neurotics; self-inflicted body injury
     - c. Genetic problems
     - d. Ceremonial and traditional types
     - e. Organic and mental disease
   - B. Malingering
     - a. Insurance fraud
     - b. Military deceit
     - c. Munchausen's syndrome
   - C. Polysurgery
     - a. Factitious surgical disorder
     - b. Erotic motive
   - D. Purposeful Accidents
     - a. Reckless behavior
   - E. Impotence and Frigidity
2. Chronic Suicide
   - A. Ascetism and martyrdom
   - B. Neurotic invalidism
   - C. Alcohol addiciton
   - D. Drug addiction
   - E. Anti-social behavior
   - F. Psychosis
3. Organic Suicide
4. Suicide

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[1] Director, Laboratory, St. Francis Hospital, Wichita, Kans.

Self-Mutilation

Self-mutilation and injury are seen in inmates of penal institutions, patients in mental hospitals, in neurotic patients, in patients suffering from genetic disorders, and in those who practice certain social customs and religious rites.

Prisoners and Patients in Mental Institutions

A protest by prisoners in Kansas State Prison in Lansing in 1969 resulted in prisoners cutting their Achilles tendons. Cooper [2] reported two situations where Peruvian prisoners cut themselves with sharp instruments as a device to escape or stop some form of corporal ill-treatment and as a form of catharsis by mentally disturbed prisoners.

Self-mutilation was described as a correlate of stress in prison by Johnson [3], who concluded that there are important functions in the cause and expression of self-mutilation in prison:

(1) the structure of the prison community,
(2) the prisoners' regarding self-mutilation as a means to gain rewards otherwise relatively unavailable to them,
(3) the prisoners' low tolerance to stress or to being placed in a particularly untenable position,
(4) the emotional consequence of placing an individual in an environment designed to frustrate achievement of personal goals, and
(5) differences among inmates in the ability to tolerate stress or to experience stress in a given situation.

The predominant method of self-mutilation in prison has been cutting oneself with a sharp instrument, such as a razor blade, a fragment of glass or wood, or a device improvised from metal utensils.

The injuries sustained by patients in mental hospitals may be extremely bizarre, including self-enucleation, perforation of viscera by probing with firm instruments, penetration of the skull with spikes, castration and wrist-cutting, swallowing foreign bodies, and lesser acts.

Neurotic Patients

Injuries produced by neurotic patients include scratching, pinching, squeezing, rubbing, stretching, binding, picking, biting, chewing, licking, swinging, grinding teeth, and plucking. The target organ is usually the skin, and severe damage may not by intended by these individuals.

Familial Disorders

Familial disorders may be associated with self-mutilation. The Lesch-Nyhan syndrome is one in which a familial disorder of uric acid metabolism is associated with mental deficiency and destructive lip biting [4]. There may be self-mutilations found in other familial disorders, such as the de Lange syndrome.

Social and Religious Customs

Although not actually self-inflicted, mutilations may be accepted by willing religious aspirants and may be part of a puberty rite or a religious rite. Major religions such as Judaism and Islamism as well as many native tribes in remote areas of the world have such rites. Social customs may demand mutilations such as teeth filing, foot binding, lip

splitting, ear and nose piercing, head flattening, and wrapping metal about the neck, wrists, and ankles. Historically, the Amazons or warrior women were examples of self-destructive behavior and mutilation as they had their breasts amputated so they would not be encumbered during combat (the word "Amazon" means without breast) [5].

Organic and Mental Disease

Self-mutilation may be part of the major psychoses. Menninger [1] notes that psychotic mutilations may be free from any real wish to die and that the injuries are quite complicated, multiple, and not clearly localized. The injuries may have sexual focus, occasionally resulting in self-castration and amputation of the penis. Self-mutilation may complicate organic disease. Goodhart [6] reported a case of a patient with chronic encephalitis who enucleated both eyes.

Target Areas for Self-Mutilation

Skin

The skin, because of its accessibility, is a very frequent target for self-mutilation. Damage may range from minor scars to disfiguring tattooing and amputation. Although the fingernail is the primary tool of injury, sharp instruments or rough surfaces have been used.

Halprin [7] classifies three levels of dermal self-mutilation: (1) neurotic excoriation, (2) delusions of parasitosis, and (3) factitial dermatitis. In the first two forms, the patients readily admit responsibility for the lesions.

Neurotic excoriations are small, irregular, oval areas of superficial ulceration that heal with scarring and, occasionally, pigmentation. The areas of the body most affected are the chest and the lateral aspects of the thighs, arms, and face. Left-sided lesions are more prominent in right-handed individuals. Wide variation in the age of the lesions is evidenced by fresh lesions being juxtaposed with scars.

Patients with delusions of parasitosis try to destroy the imagined parasites with caustics, fingernails, or sharp instruments. The distribution and variation of ages of lesions are similar to that found with neurotic excoriations. Paranoid tendencies may be pronounced in patients with this delusion.

The patient with factitial dermatitis denies knowing the origin of his lesions either as an attempt to hide his malingering from others or because of the psychological inacceptability of the act. The patient's history may include complaints of a burrowing or crawling sensation in the skin, followed in a day or two by the sudden appearance of necrotic lesions of bizarre configuration.

These lesions heal with scar formation, and histologically no specific disease process is seen. These lesions are frequently caused by cigarette burns or caustics, but Halprin [7] reports application of cutting instruments, needle punctures with contaminated material, or injection of various toxic or irritant materials.

Butterworth and Strean [8] have discussed other disturbances in human behavior that result in self-inflicted injury to the skin, and their findings are listed here.

1. Biting in various sites is a common finding. Onychophagia (chronic nail biting) may lead to maceration and infection with permanent destruction of the nail plate. Skin biting and chewing centers on the hands, fingers, and forearms, but if lax joints are present, the ankles, feet, and occasionally the genitalia may come under attack. The chronically bitten skin will show hypertrophy, pigmentation, and hypertrichosis. Lip biting leads to ulceration, swelling, and leukoplakia or to destruction of the lip, as is the case in the Lesch-Nyhan syndrome [4]. Cheek biting may occur.

2. In epileptics, tumor-like enlargements are present in sites of trauma which may be related to stimulation of fibrous tissue growth by the anticonvulsant drug diphenylhydantoin used as a medication.

3. Head banging, bumping, or rubbing seen in full term babies and in mentally retarded individuals results in subcutaneous collections of blood which may organize into nodular structures.

4. Clenching of a hand can result in injury to the distal phalanges and subungual hemorrhage.

5. The skin may be punctured and rubbed with ink by adolescents to produce a primitive tattoo.

6. Picking at chronic skin disorders such as acne may occur, resulting in severe disfigurement.

7. Pulling of the labia, nipples, ears, or nose may result in enlargement and pigmentation.

8. Reddish plaques may occur as a result of constant rubbing of the forehead or the back of the head in a bed-ridden patient.

9. Restlessness while sitting may result in rubbery plaques forming on the buttocks, outer sides of the ankles, and feet because of pressure on the skin in these areas.

10. Patients in mental institutions who strike out into the air at imagined targets, other patients, or against parts of their own bodies may cause severe subcutaneous hemorrhage and firm masses on the jaw and head or cauliflower ear. Hand injuries from constant impact of the hand against objects may result in scarring and deformities.

11. Thermophilia may result in severe burns when parts of the body are placed in contact with radiators or protective grills.

12. Teeth grinding (bruxism) is frequently seen in mentally retarded patients and results in abnormal tooth wear and symmetrical hypertrophy of the masseter muscles. In these cases painful chewing may be experienced.

13. Lip licking may occur in the mentally retarded; the tongue may be enlarged and salivation develops in excess. Maceration and reddening of the lips are marked.

14. Binding or wrapping of body parts will cause injury and atrophy of subcutaneous tissues, possible neurotic deficits, or chronic edema. In some areas of the world wrapping is practiced along with disfiguring, scarring, and tattooing as part of acceptable social custom. In Africa, wrapping metal about the neck, arms, or legs is seen in some tribes and is considered an asset and a means of beautification.

15. Pulling of body hair (trichotillomania) may occur locally or diffusely with or without swallowing of the hair.

16. Sucking of injured parts for blood has been seen as a part of Munchausen syndrome.

Injection of various substances has been mentioned but might be elaborated at this time. The act of injecting may be spontaneous or part of a calculated plan to develop a factitious entity. Ackerman [*9*] reported one instance of a factitial Weber-Christian syndrome produced by the injection of milk and associated with fever, migratory arthralgia, and skin nodules. Close observation and evaluation revealed the patient's hysterical personality and the true nature of the problem. Gershwin [*10*] reported a case of subcutaneous emphysema which required careful investigation before its cause could be discovered. Injection of fecal and infected material results in severe infections, abscess formation, and marked disfigurement [*11*]. The drug addict's self-destructive behavior should also be mentioned as the habit leads to great trouble and risks. Injection of drugs intravenously may result in infections such as hepatitis and endocarditis and in complications of embolic phenomena in the lung and kidney. The "skin-popping" behavior of addicts dependent on subcutaneous injections offers another disfiguring insult to the skin and the added risk of a tetanus infection.

Systemic and Sexual Areas

Any area of the body may be injured by psychotic or mentally retarded individuals. The eye, tongue, teeth, Achilles tendon, joints, skull, rectum, vagina, external genitalia in males, and urethra have been targets of hostility directed against the self. Perhaps the most dramatic and unusual cases of self-mutilation have been those in which the sexual organs of the individual have been attacked. Although less frequently reported in females than in males, such acts may occur in pregnant and nonpregnant women. Reich and Wehr [*12*] reported a case of female genital self-mutilation presenting as vaginal bleeding of unknown origin. They contend it is rare in the nonpregnant female and that it usually involves self-induced abortions with chemical or instrumental abortifacients. The patient of Reich and Wehr had vaginal bleeding from deep cuts caused by a nail file. Vedrine [*13*] reported severance of a prolapsed uterus by a 70-year-old woman with a kitchen knife. The use of an intra-abdominal ether injection in an attempt to interrupt pregnancy has been reported by Krzyzowski [*14*]. More violent efforts to kill the unborn child, including stabbing and shooting, are described in a case reported by Kloss [*15*].

Male self-mutilation includes castration as a self-destructive mechanism.

In most instances actual suicide may not be seriously planned. In a recent case in Kansas, a recluse in his early twenties was found floating in the water of a pit near where he lived. He was nude, and his left testis was missing. Thin parallel cuts were noted on the skin of the scrotum proximal to the previous location of the organ. He was known to have been inhaling fumes of paint thinner the evening before. Whether his bizarre behavior resulted from mental derangement related to inhalation of paint thinner will never be determined, but it is thought that his death was a direct complication of a self-mutilating act. Chandulal [*16*] has reported this injury as an unusual method of suicide in a case precipitated by depression, where the right testis was amputated with a broken water glass. Death was due to the massive hemorrhage and shock that followed the injury.

Internal complications of self-mutilation include urethral trauma with stricture and penetrating injury of the urinary bladder, rectum, external canal of the ear, nasopharynx, and vagina. Injuries caused by swallowing foreign material such as hair, razor blades, and broken glass may produce complications including ulceration and hemorrhage, obstruction, or perforation with peritonitis.

Just as positive action by a person will produce injuries, so a lack of action will have deleterious effects on the body. Thus, anorexis nervosa, seen predominantly in adolescent girls, results in death for 10% of those who have the disease.

Malingering

General

This term was originally applied to soldiers who under the pretense of sickness evade their duty. The meaning has been extended to all forms of fraud relating to sickness and injury. This act is a deliberate and conscious attempt to simulate symptoms of injury or illness with the intent to deceive or mislead the observer so that the individual achieves his own selfish end [*17*]. By feigning a medical or psychiatric illness the individual endeavors to obtain what society says he does not deserve, or he tries to avoid some responsibility which society claims is rightfully his. The malingerer may intensify symptoms of preexisting disease, tag on fictitious symptoms, or willfully protract the course or the convalescence of a disease or injury. Ingenious, artificially induced changes in body tissues may be produced with foreign agents of chemical, mechanical, bacterial, or physical nature. The resultant signs and symptoms may completely baffle the unsuspecting investigator.

Historically, references as early as 1836 refer to the problem of malingering in prisoners, sailors, and military personnel, to whom it clearly offered the only hope of escape from intolerable circumstances [*18*]. Simulation and accident neurosis following injuries to the head and spinal cord were disorders of the industrial revolution. In Prussia the introduction of the National Railway System evoked the first accident insurance laws in 1871 and 1884. In 1879 attention was drawn to the frequency with which malingering was encountered in civilians claiming severe disablement after minor industrial injury. The realization of financial gain prompted these syndromes in Prussia, and in Britain a similar situation followed the Employers Liability Act of 1880 and the Workmen's Compensation Acts of 1898 and 1906. The whiplash injury of today has its counterpart in the "railway spine" of yesteryear. Excellent treatises on the problem as seen by experienced investigators in the early part of this century were written by Jones and Llewellyn [*19*] and Collie [*20*].

Various classifications of malingering and exaggeration exist; one developed by McBride [*21*] is as follows:

> (A) Malingering: 1. The simulation of nonexisting illness or injury; 2. The voluntary provocation, aggravation and protraction of disease by artificial means; 3. False allegations as to the existence of some malady such as epilepsy. (B) Exaggeration: 1. Exaggeration of existing disease or disability, 2. Undue prolongation of the period of incapacity; 3. In the case of industrial accidents, false imputation of pre-existing disease or disability of their effect; 4. The concealment of disease or disability by those seeking employment or life insurance.

The methods used by the malingerer are myriad, but some of the more unusual approaches include creating or aggravating an existing skin disorder. This is referred to as "goldbricking" by Waisman [*22*], who has had cases such as this which are occasionally brought before Workmen's Compensation Courts or before a board responsible for Veteran's Administration pension reexamination. The solider shooting himself or the prisoner inflicting an injury to his body are other forms of goldbricking.

Criminals may attempt to change their identity by submitting to plastic surgery to change their facial features or attempt to remove their fingerprints by applying acid, burning, or cutting their fingers. The injection of contaminated material to produce local or systemic effects typifies a special type of malingerer, the "hospital hobo" or practitioner of the bizarre Munchausen syndrome.

Munchausen Syndrome

Systemic malingering is exemplified by a syndrome first described by Asher in 1951 [*23*], which he named the Munchausen syndrome after the mythical hero of German folklore Baron von Munchausen who was famed for his fantastic tales and exaggerations.

The patients with this syndrome who were studied by Cramer [*24*] had some relationship with physicians who had been important figures in their childhood, either as parental or authority figures. The physician became an object with whom love and anger were acted out. When the relationship broke down, these people assumed the passive role of patients. In Cramer's series the patients acted seductively or managed to provoke physicians into operating or into discharging them angrily. These patients worked in allied medical fields to be near doctors and had typical hysterical traits, including histrionic exhibitionism, dramatization of complaints, use of extravagant prevarication, and sexualization of the relationship to physicians. It may be difficult to separate this syndrome from hysteria. Unless the act is recognized at the beginning by the physician, the actor will become a patient and his hosptial course may follow a regular pattern.

The dramatic history and physical findings, such as hemorrhage, high fever, severe distress, and "obvious" pain or infection, may mobilize the physician into responding with opiates and concentrated diagnostic and treatment efforts. The patient's guile and

preparation may lead the unsuspecting physician to seek proof of a diagnosis of a rare entity. The patient attracts attention, demands medications, and has an underlying resentment and bitterness against the physician. The patient's ambivalence becomes evident, and he complains of being mishandled and accuses former physicians of having misdiagnosed him or of having contributed to an aggravation of his state. If he can succeed in getting a physician to operate on him despite poor indications then it is easy for him to accuse the physician of selfish and sadistic behavior. The patient usually allows his hoax to be uncovered and faces the angry condemnation of physicians. The patient may sign out or be discharged. At this time he may accuse the physician of incompetence or malpractice. Unless the psychological problem is recognized and treated, the patient will wander on to another unsuspecting hospital.

The types of cases seen in Munchausen syndrome have been classified by Asher into three groups: (1) the patient with acute abdominal symptoms, (2) the patient with bleeding from a bodily orifice, and (3) the patient with acute neurological features such as coma, headaches, and blackouts. To this list should be added the patient with a cutaneous-type injury and an intriguing past history. The patient with abdominal symptoms may have signs of previous surgery and may convince the attending physician of his need for further surgery. The patient presenting with bleeding problems may have learned how to traumatize the nasopharynx, to swallow blood to produce hematemesis, to initiate a severe nose bleed for hemoptysis, or to cut the vaginal mucosa or rectal mucosa to produce severe bleeding episodes. Injury to the mucosa of the external canals of the ears may simulate head injury and fool the unsuspecting physician. Internal bleeding may be produced by patients taking Dicumerol®, and a hemorrhagic diathesis may be simulated. Carotenemia, a simulation of jaundice, was produced by excessive eating of carrots by troops in the trenches during World War I [*25*]. Factitious anemia may be produced by periodic phlebotomy in a patient. In a case reported by Daily [*26*], a patient who was working as a laboratory technician attempted to produce a hemolytic anemia by withdrawing blood, lysing it with sterile water, and reinjecting it intravenously. Factitious proteinuria has been produced by a patient introducing egg white into the bladder through a catheter.

The patient's symptoms may continue unabated while in the hospital unless the physician suspects malingering. A search of the patient's belongings might reveal pins, needles, broken thermometers, clothing from other hospitals, and possibly medical literature from which ideas may be obtained to increase the patient's guile.

Addicts may use the Munchausen syndrome approach to receive a short-term supply of drugs for their habit. They are easily detected by the presence of previous injection sites and debilitated condition and behavior. Factitious lymphedema of the hand following relatively minor injury may be caused by a tourniquet, irritation of the skin, or blows to the back of the hand [*27*]. The dominant hand is more affected than the nondominant hand. In Smith's series [*27*] neurosis, psychosis, or suicidal tendency was diagnosed in these patients; malingering for financial gain was not a primary goal. Insurance fraud may offer great challenge to the investigators of a case of suspected irregularities. On occasion physicians may be involved with a fraudulent claim. One such case involved the use of digitalis preparations to produce changes in an electrocardiogram, which resulted in the claimant being declared eligible for disability payments. The injuries related to industrial or vehicular accidents have a high potential for fraud, either by exaggeration of minimal injury or by claims for chronic suffering, usually emotional.

Polysurgery

Polysurgery, or compulsion to submit to surgical operations on many occasions, is considered by Menninger [*1*] as a form of localized or focal self-destruction, a partial

suicide, allied in its motivation to major suicide and differing from it in that the death instinct is absent, averted by the sacrifice of a part for the whole. The responsibility for the act is partially shifted to a second party; thus, it differs from suicide and self-mutilation.

Purposeful Accidents

Purposeful accidents are thought by Menninger [*1*] to have the same motives as in other forms of self-destruction, classified as extreme (suicide) and partial (self-mutilation, compulsive submission to surgery, and malingering). These motives include elements of aggression, punishment, and propitiation, with death as the occasional but exceptional outcome; thus, the individual will involve himself in an accident from which there is a chance of escape.

Sexual impotence and frigidity are considered focal self-destructive behavior as the repudiation of normal genital pleasure [*1*]. This inhibition of sexual function and pleasure was considered as another form of functional suicide by Menninger; it is in response to unconscious motives and emotional conflicts arising from fear of punishment, reprisal, and malignancy and as consequences of unconscious hate. There is a tendency to repudiate and resign the appropriate biological role in favor of self-destructive motives of an aggressive and self-punitive nature.

Summary

Self-destructive behavior of man and its consequences may be presented in various forms, including self-mutilation, injury, and malingering, and with various manifestations, including the Munchausen syndrome, polysurgery, purposeful accidents, impotence, and frigidity. The general subject of focal suicide has been a relatively unknown and unrecognized entity for different reasons, including the fact that most physicians are trained to approach a case in a manner which treats the patient-physician relationship as one of honor and faith regarding the authenticity of the complaints of the patient. The maturity of years and experience may be required before the physician becomes aware of the motivation of patients' behavior. It is hoped that this article will provide new insight into areas which may be unfamiliar to the forensic practitioner and clinician but which might enable them to learn about the background of an unexpected death or the possibilities of motivation in civil suits alleging professional negligence or malpractice.

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Laboratory
St. Francis Hospital
Wichita, Kans. 67214